

The Meyer Furnace Co.

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Alan O'Bright



The WEIR BOOK FACTS

Giving a Healthful Home Atmosphere the Attention the Family's Health Deserves

₩ No. 21]

The Meyer Furnace Co.

Peoria, Illinois

Manufacturers of

The WEIR (Steel) Gas & Soot Furnace

Printed in Peoria, Ill., U. S. A.

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THE WEIR "BOOK OF FACTS".

And to present these FACTS in a clear, understandable, reason why manner that would explain, and not add confusion, to the public on the subject of warm air heating.

It is because the WEIR STEEL furnace gives more than just "Heat" that the demand for it has constantly grown year after year—and is growing faster than ever now!

Some of these "extras" are:

A better "Home Atmosphere." No harmful fuel fumes in the rooms, because electric welded seams prevent leakage.

A longer life of care-free service because of STEEL construction. (Many 35-year-old WEIRS are still "on the job"!)

An amazing fuel economy because of better combustion and greater heating surfaces, making for higher efficiency.

Come on into the Book of Facts with us, and let us show you "How" and "Why."

THE MEYER FURNACE CO.

Peoria, . . Illinois



Non-Debatable Fact No. 1

THE Atmosphere Cannot be Healthful In Any Home in Which Gas Fumes From the Furnace Can Enter the Rooms.

No one can sincerely dispute that fact. The harmful effects of "Carbon Monoxide" (one of the gases resulting from combustion) are too widely known and recognized to admit of discussion on this point. So we promptly give you—

Non-Debatable Fact No. 2

NO FURNACE that consists of sections and that relies on "cement" to make it "gas tight" can stay "gas tight" any longer than it takes the furnace fire to bake out that "cement" and reduce it to dust.

The "joints" in most furnaces, many of which make broad claims to being "gas tight," are made up as shown in the small

sketch shown here—commonly called a "cup" joint. When such a furnace is installed these joints are filled with a putty-like cement that does make them "gas tight." Then comes the furnace fire—and it is the most natural result imaginable that this "cement" is baked out and is reduced to dust—and some day some one says "Phew, the furnace is gassing, open up the house."



And the only way to repair such a furnace (temporarily) is to tear it down and "re-cement" those joints—as thousands of home-owners have learned.





Some of the Outstanding Features of the Weir Furnace shown in Illustration on this page

Correctly located water pan of three gallon capacity. May be fitted with automatic valve, or filled by hand.

Large size doors for convenience in firing or removing ashes.

Double leakproof ring at each casing joint. This exclusive WEIR Feature makes the tightest and best casing obtainable and makes leakage of dust, dirt or fumes from basement impossible.



The Words "Gas-Tight" Apply to the Weir Year After Year

MANY years ago the makers of the WEIR STEEL furnace recognized that warm air furnaces could never be what they should be as long as leaks of fuel gases could enter the living rooms, and they set about to rectify the fault.

They adopted STEEL as an improvement over cast iron, and they have been building of STEEL ever since. The first method of making the furnace "gas-tight" was riveting—and every joint was riveted as tight as that of a steam boiler. Later, arc-welding was employed on all WEIRS making "seams" insead of joints and uniting the steel plates into practically one piece.

Today the WEIR STEEL furnace is "Riveted for Strength and welded for Tightness"—a strength and a tightness that last thruout the years as is ably demonstrated by the fact that many 35-year-old WEIRS are "still on the job and going strong"—with present-day WEIRS being made better than it was known how to make them then!

And Here is Another "Health Fact"

THE WEIR Humidifier Evaporates a Maximum of Water in Order to Give the Home Atmosphere Proper Humditiy and Healthfulness.

A healthful home atmosphere must have a decided degree of moisture (humidity)—and the Weir Water Pan is scientifically located for maximum evaporation, to insure healthful humidity. See illustrations on pages 8, 12 and 22.

You see, the subject of HEALTHFULNESS has been taken care of in the WEIR furnace in a degree not even approached by the average furnace—and HEALTHFULNESS is more vitally important than mere "Heat"—or low price!



Another Non-Debatable Fact

THE STEEL That is Used in the WEIR Furnace Is a Basic Reason Why WEIR Furnaces Cost the Least PER YEAR!

The real cost of a furnace is properly measured by the Installation Price plus the Fuel Expense per year divided by the number of years that furnace renders satisfactory heating service. ANY product that costs \$100 and serves satisfactorily for five years is really lower priced than another one that costs \$75 and which must be discarded or replaced after two years' use.

And STEEL, plus WEIR engineering and construction, is the reason why WEIR furnaces render care-free service for so long a time that, with their extreme fuel economy, they cost the least PER YEAR. The ideal "proof of the pudding" lies in the fact that "35-year-old WEIRS are still on the job and going strong." See page 19.

The STEEL used in the WEIR furnace is made to the specifications of the Meyer Furnace Company—and a third of a century of experience is put into that steel. There has never been a hesitation to adopt improvements or alterations—but no really BASIC change has been made since the beginning. The principles of design and construction upon which this furnace was founded still hold true.

One More Outstanding Weir Fact

EXCLUSIVE Combustion and Heat Radiation Features Enable the WEIR to Maintain a Fuel Economy That Delights Owners Year After Year After Year.

Back in the early 80's the original WEIR patents were obtained. These patents (in addition to construction features) covered certain smoke and soot consuming principles that are, to this day, exclusive in the WEIR. By circulating air around the fire-pot, thus pre-heating it and then admitting it to the fire



thru the holes at the top as shown in the illustrations on page 9, the WEIR burns all the combustible fuel gases, thus producing a much hotter flame—which means more heat from each shovelful of coal.

In order that anyone may SEE these jets of gas flame and KNOW that this feature is no mere claim, the manufacturers of the WEIR furnace place a mica window in the fire door so you can look thru and verify the claim as a FACT.

As we say, this more thorough combustion feature naturally results in more heat from the fuel—with a resultant saving in the amount of fuel required to maintain the desired temperature in the home.



(Phantom view showing swinging smoke curtain inside.) Notice the unusual width and height of the WEIR Door. Will accommodate a large shovel and is amply high for big chunks of coal.

Doors are fitted by surface grinding, assuring perfect tight fitting always. Notice the window in center.

Here is a feature that is perhaps the first to be inspected by every prospective buyer of a furnace—the size of the feed door—and quite naturally so for it is this feature with which he comes in contact frequently, and it may be either a constant and very annoying inconvenience, or a great convenience.

In designing this has been carefully considered, and you will find the WEIR Furnace unexcelled in this respect.





The WEIR Furnace without Casing

(Showing front in Phanton)

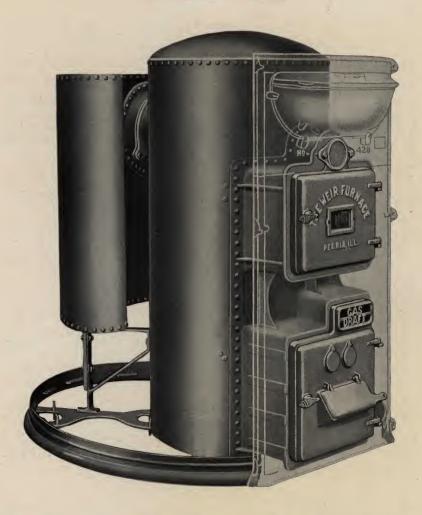


Illustration showing steel body construction, with fuel and ash passages extending *thru* the front and doors fitted directly to the face of this casting—no door frames used.

All joints are machine riveted under tremendous pressure, making them absolutely tight.

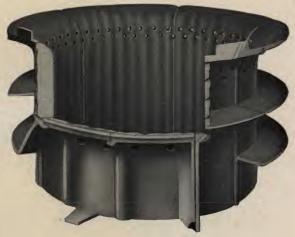


WEIR

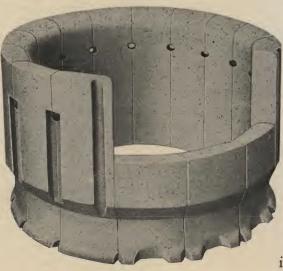
HERE we show the WEIR Fire Pot which is made in sections and sets inside the main combustion drum so it may be removed or replaced without disturbing any other part of the heating plant.

The "flanges" on the backs of the castings form the a ir passageway from the "Gas Draft," sending the air around the outside to become heated before entering the fire pot.

Over forty years of success prove



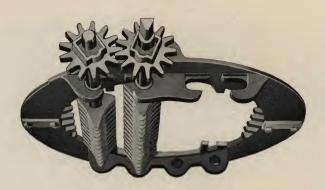
the correctness of this WEIR principle of admitting pre-heated air over the fire for proper combustion and highest fuel efficiency.



The cast iron equipment described in the foregoing, special TILE (fire brick) is optional in the WEIR Furnace. Note that this special lining also embodies the pre-heated air-blast feature for efficient soft coal burning, but is particularly recommended for burn ing hard coal or coke.



The Weir Grates





The WEIR Grates are the simplest and most perfect working on the market. They operate in such a manner as to free themselves of clinkers and clear the fire from ashes without loss of fuel. They are constructed with special stress laid on durability to withstand heavy wear and tear. In case of breakage, grates can be easily replaced in a few moments. The shaker bars and side bars become interchangeable by merely reversing cog wheels.



Another Non-Debatable Fact

IN Any Heater of Any Type All of the Heat That Escapes Thru the Smoke-Pipe and Up the Flue Is Lost Heat—and Money.

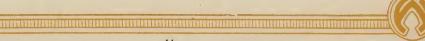
It doesn't require a heating engineer to grasp that fact, but too few people ever stop to think about it.

WEIR engineers stopped to think about it years ago—and they designed the WEIR EXTRA-HEAT radiator that is illustrated on pages 12 and 13. After the fuel flames have heated the principal combustion chamber of the WEIR, they MUST pass thru the connecting collar and around thru the EXTRA-HEAT radiator as shown by the arrows. THERE IS NO SHORT CUT. The ONLY way to the flue is around that plate—which means that all of this extra radiating surface (just look at the size of it again!) is heated, too.

AND THE HEAT FROM THIS, AS WELL AS FROM THE MAIN CHAMBER IS CARRIED UP INTO THE ROOMS—IT DOESN'T ESCAPE UP THE FLUE!

And it doesn't require a heating engineer to grasp this fact, either: That Extra-Heat naturally means LESS FUEL each and every season, year after year after year.

With features such as these, is it any wonder the WEIR STEEL furnace has grown in popularity with each succeeding year, and that it is recognized as the most economical furnace to own?







The Weir Steel Furnace

Top View

Illustration showing top view with hood of casing removed. We invite particular attention to the large, free air area, which permits of supplying a large volume of pure, warm air, as compared to the small area of ordinary furnaces in which the air must necessarily be overheated.

Also note the large dimensions of Radiator or extra heat drum, in which the heating surface alone is equal to the entire heating surface in some furnaces. The location of the water pan is important, too.

WEIR



Rear View of Weir without Casing

(Showing extra heat drum, or radiator, in section)

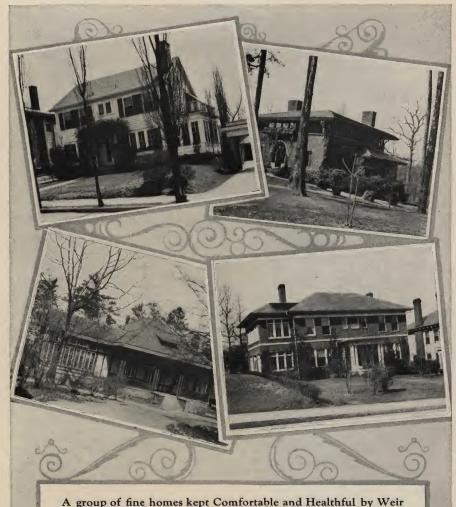
This view clearly illustrates the principle of the WEIR Extra Heat Drum or Radiator—how the products of combustion, after leaving the combustion chamber, travel thru this auxiliary drum on their way to the chimney. In passing thru this extra-heat drum, the heat units are radiated into saving in fuel.



Warm Air Heating Facts You Should Know

- 1 The entire house is constantly ventilated with a warm air heating plant, because ALL the air from ALL the rooms is constantly traveling—or circulating. When cooling it is moving downward and passes down and thru the cold air ducts to the base of the furnace, where it begins to warm, and as it is heated, it rises and passes up and out thru the various pipes to the several rooms of the home. And then it starts the "circuit" all over again—constantly circulating and constantly changing the air in all the rooms.
- 2 Warm air heat is MOIST air heat, since practically all warm air heaters have a humidifier in some part of their construction, put there for the one and only purpose of giving a healthful moisture to the Home Atmosphere. Other heating systems take moisture from the air instead of providing it. Ask your Doctor.
- 3 Warm air heating gives you "quick action." Warmed air starts flowing thru the registers almost as soon as the fire is kindled—there is no long wait while a boilerful of water is being heated. You get the heat you want when you want it—a real convenience at all times.
- 4 The original cost is comparatively small—much lower than that of other systems that do not offer you half as many advantages as warm air. Fuel costs are also lower.
- 5 No bulky radiators, taking up space and hard to clean under and behind. Instead, artistic registers, flat against the floor or wall pour forth clean, moist, healthful warm air.
- 6 No water pipes to freeze and burst, ruining walls, floors, furniture and rugs in case you are unexpectedly kept from home in cold weather. No radiators to leak on floors or rugs.
- 7 Easiest for a woman to understand and operate. All controls on living floor—automatic if desired. No trips to basement except to put in fuel. A maximum of Comfort and Healthfulness at a minimum of expense and care!

WEIR/



A group of fine homes kept Comfortable and Healthful by Weir Steel Furnaces — More and more fine homes are installing this superior warm air heater

The WEIR Furnace is in keeping with the better class of homes.









The WEIR Oil Burning Furnace

(Without Casing)

Doors cut to order to accommodate any make or type of Oil Burner.







Oil Burning in Warm Air Furnaces Demands Positive Leak-Proof Construction—

absolutely and permanently tight—to guard against the possibility of smoke or odor finding its way into the casing and thence up thru the warm air pipes.

It has been conclusively proven that only the best construction will withstand the strain of quick expansion and contraction resulting from the intense heat generated by the intermittent flame of oil burners, and jointless steel construction is therefore admittedly better for oil burning.

Because of its jointless steel body construction the WEIR Furnace is the most desirable for oil burner installation. The steel welded and riveted construction thruout makes it absolutely and permanently tight and leakproof.

Another outstanding advantage of the WEIR Furnace for oil burning lies in its immense heating surfaces and long fire travel—both decidedly governing factors in economical and efficient oil heating—yet, there are no small flues or complicated dampers to cause trouble.

The WEIR Furnace can be quickly converted to burn oil and as quickly and conveniently equipped for coal burning whenever desired.

Truly the WEIR is the one PROVEN satisfactory warm air furnace for oil burning.





THE letter reproduced on this page (one of many) is selected because it tells a very convincing story. It speaks for itself.

J. A. PORTNER

NORTHERN ILLINOIS DISTRIBUTOR OF
ELECTRIC POWER PLANTS AND
WATER SUPPLY SYSTEMS
WHEATON, ILLINOIS

May 8, 1926

Meyer Furnace Company, Peoria, Ill.

Gentlemen:

Six years ago, I built a new home consisting of eight large rooms, all on one floor and equipped this home with what I thought was the best warm air heating plant on the market, at any rate I paid more money for it than I could have bought any other warm air job. Two years later I installed an Automatic Oil Burner and immediately got into trouble—not with the oil burner but with the furnace as it leaked like a sieve in many places. I had it taken down and re-set which cured it for a short time, but I came to the conclusion that it was only a make-shift and that the only way to burn oil successfully in a warm air furnace was to have an absolutely tight furnace and one that would stay tight. After looking the field over, I decided that the WEIR would meet this requirement and so far as I could learn, was the only furnace built that would meet the requirement.

Since installing the wEIR we have enjoyed absolutely clean and perfect heating in our home and as I am a firm believer in ample size on all warm air furnaces, I will say that this furnace (No. 330 WEIR) takes care of my home in the most severe weather without showing any indications of becoming red at any point and I feel that under these conditions it will no doubt stand up and be giving as good service 50 years from now.

I think that the warm air furnace business in this country is in a deplorable situation when companies will put out and spend money selling a product that is only thrown together in pieces or with a little cement in the joints and cannot under any circumstances make a good job nor stay tight. I think more aggressive selling of your product would be a great benefit to the people of the land.

Yours respectfully.

J. A. Portner: RW

P.S. You may use this letter any way you wish.

WEIR/



"35 Years Old and Still Going Strong"

This "good old Weir" was installed in 1891 at 201 Kettelle St., Peoria, Illinois. It was quite the custom in those days to "brick them in"—a method that is not so common today.

The present owner of the premises is Mr. Edw. Leisy and the store is occupied by a Larkin Grocery store. Both owner and tenant will quickly bear witness that "The Old WEIR is Still Going Strong." In fact, one man remarked, "It isn't even middle-aged yet!"



Why the Weir is Cleaner

And it is another WEIR FACT that it IS cleaner.

THE DOUBLE casing rings that draw the casings tight and true effectively shut out all basement dust and dirt. Coal dust or fine ashes cannot get into the casing of the WEIR. An exclusive feature!

Then there are the absolutely and permanently gas, soot and smoke tight WEIR seams that never allow any of the three to escape into the rooms. Naturally, these features mean a cleaner Home Atmosphere and cleaner walls and hangings.

Thoughtful people will, of course, realize that the furnace cannot be held responsible for dirt that enters the house thru open doors or windows or that is carried in by those entering. This dirt and dust (which gets into every home constantly and which can be seen in every shaft of sunlight you look at) naturally moves with the circulating air into and thru the rooms, but none of it is created by the furnace itself if the furnace is a double-ringed, arc-welded WEIR.

So we repeat: The home heated by a WEIR STEEL furnace is cleaner because no basement or furnace dirt, dust, ashes, soot or smoke ever enters the rooms.

Cleaner air! Cleaner rooms! Healthful air! Healthful rooms!

'Tis far better to think before you buy a thing, than to reflect afterwards!



The Weir Water Heater



THE WEIR arrangement for domestic hot water supply is not an ordinary pipe coil, but a special water heater as illustrated herewith, proven by far superior.

This device, which is an exclusive WEIR feature, consists of a cast iron head fitted with a large wrought iron pipe, having a smaller inner pipe as shown. The cold water intake is thru the front connection and the hot water outlet may be had at either side. An opening is provided above the fire door of the WEIR Furnace and the installation of the Water Heater is very simple. Installed, it is up out of the fuel bed and out of the way for firing. It supplies an abundance of hot water for bathroom and kitchen.

Another Exclusive Weir Feature

The combination cleanout, check damper and smoke outlet.

Note that this device at the back and outside of the casing, in addition to serving as smoke pipe collar, also serves the purpose of double check-damper and clean-out. Either side, or both, may be used to suit the convenience—depending upon the position of the furnace.







Another view to emphasize all of the features of the Weir Furnace. They last year after year after year. Economy and great fuel saving.



A Very Important Question

Ask It Of Any Man Who Wants To Sell You a Furnace.

"Will the furnace you sell me be installed according to the STANDARD CODE?"

UNLESS he can truthfully answer "Yes" and is willing to put it in writing your job will almost certainly be skimped or inadequate in some respect. The furnace may be too small for the job it has to perform—which means forced-firing and chilly rooms in extreme weather.

There are many ways in which skimping will save costs and enable the installer to lower his prices or increase his profits—BUT ALL OF THESE RENDER THE HEATING PLANT LESS SERVICEABLE, MORE INADEQUATE AND SHORTER LIVED.

Economy of this sort is the most flagrant extravagance in the end—as thousands of home owners will mirthlessly testify.

The "Standard Code" is no one manufacturer's set of rules it is the Code of Standards based on scientific research, and adopted by the National Warm Air Heating & Ventilating Association, The American Society of Heating & Ventilating Engineers, The National Association Sheet Metal Contractors, Western Warm Air Furnace and Supply Association and the Midland Club. It is designed to insure adequate heating.

However, many installers, by violating this Code, can quote you prices on "a furnace" that will be far below what a conscientious WEIR dealer can quote you—because he is expected to adhere to the Code.

If these other dealers are compelled to follow the Code, their jobs cannot be very far below the price of a properly installed WEIR STEEL furnace with all the features and advantages that have been set forth in this "BOOK OF FACTS."

Which statement, in itself, is another "fact" that should impress you very deeply, for after all is said and done, the initial price fades into insignificance as the years march by and you continue to have Healthful, Moist, Clean Warm Air with no hint of gas fumes; no expensive re-building and re-cementing—AND NO REPLACEMENT OF YOUR FURNACE BE-CAUSE "THE OLD WEIR IS STILL ON THE JOB AND GOING STRONG!"



Numbers, Sizes, Capacities, Etc.

No.	Main Combustion Drum Diameter	Casing Diameter	Warm Air Pipe Area Rating	B. T. U. Capacity
421	21"	48"	374"	51609
424	24"	52"	491"	67737
428	27"	54"	631"	87091
430	30"	58"	865"	119347
433	33"	65"	1076"	148377
436	36"	67"	1287"	177408



The above illustration is a reproduction in exact size of a brass plate that is attached to the front of every WEIR Furnace. Notice that it bears the individual serial number, the size and installation guarantee. Notice particularly that it also bears the certified figures as to its rating in warm air piping and B. T. U. capacity.

The ratings of the WEIR Furnace are not "padded." They are absolutely proven and positively correct. They are in accordance with and based on the Warm Air Heating Research at the University of Illinois under the direction of the National Warm Air Heating and Ventilating Association.

AND REMEMBER THIS:

Unlike other guarantees as the WEIR is unlike ordinary furnaces, the WEIR Furnace Guarantee is for a period of five years and covers the ENTIRE furnace—no parts excepted.







"It Does Save Coal"